

8/26/13 – Opener:

Write an algebraic expression for each word phrase:

3 more than 10 times a number x

$$10x + 3$$

The product of 4 and the ⁺sum of a number x and 8

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$$4(x + 8)$$

Monday, 8/26/13 – Agenda

- Opener
- Assignment Guide
- Section 1.2 – Order of Operations

Homework:

p. 13-15 (12-34 evens, ~~38-40~~)
40, 58, 64

Section 1.2 – Order of Operations & Evaluating Expressions

Goals:

- Simplify expressions involving exponents
- Use the order of operations to evaluate expressions

Key Terms – Vocabulary:

- Power
- Exponent
- Base
- Simplify
- Evaluate

Key Terms - Vocabulary:

- Power

$$10^4 = 10 \times 10 \times 10 \times 10$$

- Exponent

- ARE USED TO REPRESENT REPEATED MULTIPLICATION OF THE SAME NUMBER

- Base

- Simplify

- REPLACE A NUMERICAL EXPRESSION WITH A SINGLE VALUE

- Evaluate

EXPONENT

$$2^4 = 2 \times 2 \times 2 \times 2 = 16$$

BASE

$$\left(\frac{2}{3}\right)^3 = \frac{2}{3} \times \frac{2}{3} \times \frac{2}{3}$$

$$\frac{4}{9} \times \frac{2}{3} = \frac{8}{27}$$

$$(6-2)^3 + 3$$

$$4^3 + 3$$

$$64 + 3 = 67$$

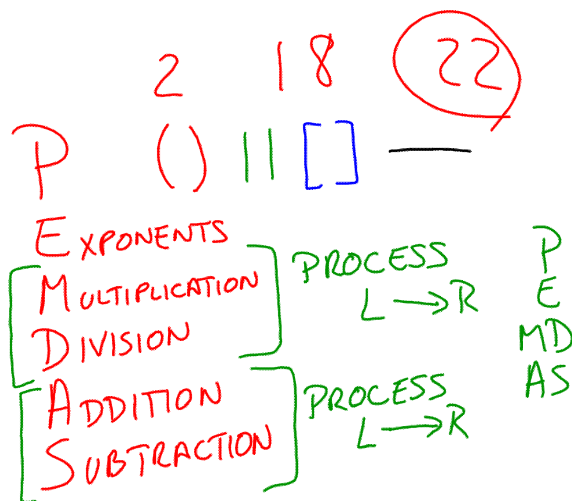
$$\begin{array}{r} \times 4 \\ 16 \\ \times 4 \\ \hline 64 \end{array}$$

Order of Operations:

Evaluate the following expressions:

$$32 \div 4 \cdot 2 \quad 4 \text{ or } 16$$

$$25 - 15 \div 3 + 2$$



EVALUATE: REPLACE THE VARIABLES
WITH A VALUE, THEN
SIMPLIFY

$$X^2 + X - 12 \div Y \quad \begin{matrix} X=5 \\ Y=2 \end{matrix}$$

$$5^2 + 5 - 12 \div 2$$

$$25 + 5 - 12 \div 2$$

$$25 + 5 - 6$$

$$30 - 6$$

$$24$$

$$(XY)^2 \div XY$$

$$(5 \cdot 2)^2 \div 5 \cdot 2$$

$$(10)^2 \div 5 \cdot 2$$

$$100 \div 5 \cdot 2$$

$$\begin{matrix} X=5 \\ Y=2 \end{matrix}$$

$$10$$

$$20$$